Part B – Health Facility Briefing & Design

25 Burns Unit

iHFG

International Health Facility Guidelines

2025

Table of Contents

25 Burns Unit

1 Executive Summary

The Burns Unit is a specialized form of Intensive Care Unit for patients who have suffered serious burns. These injuries are significant and complex, requiring an initial period of hospitalisation that is often lengthy, followed by months or even years of extensive rehabilitation.

These individuals must be closely monitored, evaluated, and cared for at all times. Patients with severe burns frequently require mechanical ventilation and care under the supervision of intensive care and other critical care services and staff due to the multisystem impact of the burns.

Patients in this unit will require access to a variety of treatment types including initial wound excision and biological closure, definitive wound closure, reconstruction and finally rehabilitation.

The treatment may involve skin grafts and water treatment. Following the initial treatment, some patients will require a longer-term rehabilitation to regain the functionality of the affected body parts.

Patients suffering from severe burns are regarded as immune-compromised due to the partial loss of the functionality of the skin as an important protective organ against external pathogens. For this reason, the patient rooms need to be configured as single bed Positive Pressure isolation rooms including anterooms. The Unit will also have a Burns Assisted Bathroom and an optional Therapy Pool.

Burns Units may be designed to share certain elements with adjoining units such as Operating Theatres for the treatment of the patients including wound treatment and skin grafts. However, in this FPU it has been assumed that all the requirements are provided within a dedicated Burns Unit containing the accommodation, treatment and rehabilitation.

The Burns unit will be staffed with specialised doctors, nurses, and multidisciplinary healthcare workers who will coordinate the varying treatment resources required to care for these critically ill patients until they can be discharged to a general Inpatient Unit, a Rehabilitation Unit or home.

The Functional Relationship Diagram for the Burns Unit indicates the ideal internal relationships between the key rooms, based on the flow of patients, staff and goods. They also indicate external relationships with other key FPU's (hospital departments) and services.

Design Considerations address a range of important issues including Finishes, Accessibility, Acoustics, Safety and Security, Building Services, and Infection Control.

This FPU describes the minimum requirements for support spaces of a typical Burns Unit at Role Delineation Levels 5/6.

The typical Schedule of Accommodation (SOA) is provided using Standard Components (typical room templates) and quantities for the rooms. Optional specialised operating room types are also noted and can be selected separately. The SOA guides the designers to create their project-specific SOA's.

For each of the nominated room types within the SOA the code link to the corresponding Room Data Sheets (RDS) and Room Layout Sheets (RLS) has been provided. Readers may use those codes to access this information on the rooms in the section titled Standard Components on the website.

Further reading material is suggested at the end of this FPU but none are mandatory.

Users who wish to propose minor deviations from these guidelines should use the Non-Compliance Report (in Part A appendices) to briefly describe and record their reasoning based on models of care and unique circumstances. The responsible Health Authority may then consider the circumstances and accept such deviations.

The details of this FPU follow overleaf.

2 Introduction

The Burns Unit is a specialised unit for the management of patients who have sustained a severe burn injury. These injuries are considerable and complex requiring an initial period of hospitalisation that is often lengthy and often followed by many months, even years of intensive rehabilitation.

These clients must be closely monitored, evaluated, and cared for at all times. Patients with severe burns frequently require mechanical ventilation and care under the supervision of intensive care staff, supported by other critical care services due to the multisystem impact of the burns.

The unit will be staffed with specialised doctors, nurses, and multidisciplinary healthcare workers who will coordinate the vast treatment resources required to care for these critically ill and immune-compromised patients.

3 Functional and Planning Considerations

Operational Models

The Burns Unit is a separate specialty with an independent management structure. However, it could be collocated back-to-back with the ICU or other critical care units for clinical and staffing support but should be physically separate.

The Burns Unit will generally operate on a 24 hour per day, 7 days per week basis.

Models of Care

The principal management of the patient with severe burns comprises of four phases:

- Initial evaluation and possibly resuscitation
- Initial wound excision and biological closure
- Definitive wound closure
- Rehabilitation and reconstruction.

The provision of a seamless model of burns care enables the patient to efficiently move from acute care to rehabilitation, then step-down facility and finally ambulatory care. A multidisciplinary care approach is essential for the care and management of patients with burns to achieve optimal healthcare outcomes.

Planning Models

Bed Numbers and Features

The number of beds shall be determined by the facility's service plan. A typical Burns Unit as outlined in this FPU is comprised of 12 beds (± 2 as recommended maximum) with the unit's composition similar to the requirements of an ICU pod. The Burns Unit area will be larger than a typical Intensive Care pod due to the additional support spaces and services required for the Burns Unit to be self-sufficient in its patient care and treatment. This should be considered at the briefing and planning stage.

Due to the partial loss of the skin's function as the principal protective organ against external pathogens, people with burns are considered immune-compromised. As a result, positive pressure isolation rooms with anterooms are required in the Burns Unit.

Due to a shortage of sufficient positive pressure rooms, intubated or critically unstable burns patients are often unable to be admitted to a standard ICU. Intubating or heavily sedating burns patients is common due to the severity of their injuries and the invasive and painful treatment process. Therefore, Burns Units are required to contain only single positive pressure rooms suited to care for these patients and their medical needs.

Considering the care demands of Burns patients and the likely inability to transport patients to other Units for treatment, the Burns Unit is anticipated to be self-sufficient in terms of support rooms and spaces. The Unit's number of support spaces and treatment rooms does not have to correspond to the number of beds. Even with a smaller number of beds (less than 12 beds), a full set of supporting rooms will still be required.

The positive pressure bedroom size should be sufficient to accommodate the patient, necessary personnel, monitoring capabilities, life support equipment and support services with safety considerations. Work surfaces and storage areas must be adequate to maintain all necessary

supplies and permit the performance of all desired procedures without the need for staff to leave the room.

In addition to positive pressure Intensive Care bedrooms, the unit may also include a number of standard single bedrooms for rehabilitation. Furthermore, at least one negative pressure isolation Intensive Care room must be provided per unit to allow for infected patients to be isolated from other patients. The decision on the use of such negative pressure rooms will depend on the clinical assessment of the patient.

Planning Models

The Burns Unit should be a secure unit provided in a location that has no through traffic or open access to visitors; and avoids or minimises:

- Disturbing sounds (ambulances, traffic, sirens)
- Disturbing sights (treatment areas, other patient rooms)
- All beds should be visible from the Staff Station or where visibility may be compromised due to the plan geometry, satellite staff stations or observation bays should be considered.

The Burns Unit will have several positive pressure isolation rooms with anteroom and ensuite facilities, as well as optional step-down rehabilitation single bedrooms. To protect the patient from contact pathogens and hospital acquired diseases, all visitors must put on a gown and wash their hands at a clinical style hand wash basin. They must keep this gear on for the duration of their visit.

Upon exit all persons will be required to gown down before leaving.

The overall planning model of a Burns Unit is similar to an ICU pod with a preference for the racetrack model with central staff station and support areas.

Functional Areas

The Burns Unit consists of the following Functional Areas:

- Entry/ Reception, which may be shared with adjoining units including:
  - Reception
  - Waiting areas; separate Male and Female may be provided and sized to accommodate family members, with access to public amenities
  - Meeting room that may be used as a Distressed Relatives Room
  - Gown-up and Gown-down rooms and associated hand wash facilities for visitors
- Patient areas with:
  - Positive pressure (Class P) Isolation rooms with Anterooms and Ensuites
  - Negative pressure (Class N) Isolation room with Anteroom and Ensuite
  - Optional Single bedrooms (Class S) bedrooms for rehabilitation
  - Burns Assisted Bathroom
  - Procedure Room (or Minor OR)
  - Optional Therapy Pool
- Support areas consisting of:
  - Staff Station, Reporting Station and write-up areas
  - Beverage Bay and Bays for linen, resuscitation trolley, laboratory facilities and mobile equipment
  - Clean and Dirty Utility Rooms
  - Medication room
  - Storerooms for equipment, general stock and sterile supplies
  - Respiratory work room
  - Biomedical Workshop which can be combined within the facility SOA
- Staff Areas including:
  - Offices
  - Meeting Room/s and interview rooms for education sessions, interviews with staff or clients and other meetings
  - Staff Room
  - Staff Station and handover room
  - Staff change rooms with toilets, shower and lockers

The above zones are briefly described below.

Reception/ Staff Station

Reception is located outside the unit. It is the receiving hub for visitors.

Waiting areas for visitors should be provided in close proximity to the entry and ideally be monitored by the reception. Visitors wishing to enter the unit from the waiting areas will be controlled by the Reception via a remote door release. The door access will be designed in such a way to ensure visitors enter through the gown-up room and exit through the gown-down room. Separate provisions for staff for gowning-up for the duration of their shifts is expected.

Alternatively, an intercom system can be used in the absence of a Reception. The intercom system, ideally with a video camera and a monitor, is linked to the Staff Station to direct and assist the visitors.

Access to male and female toilet facilities and prayer rooms shall be provided. These should be located adjacent to the waiting area or with an adjoining inpatient or critical care unit.

The Staff Station is the internal management hub of the unit and will be used to control the security and management of the Unit. The Staff Station must have a direct view of the patients in the Positive Pressure isolation rooms. If the geometry of the plan does not permit this direct observation, then the brief should include the provision of de-centralised reporting bays with direct observation of the isolation rooms. This also applies to the Negative Pressure Isolation Room. Any other bedrooms, for example single rooms for rehabilitation require observation from a Staff Station through the circulation corridor but not into the bedrooms.

Patient Areas

Patient Areas will include:

- Positive Pressure Isolation Bedrooms with the required mechanical ventilation and critical care management
- At least one Negative Pressure Isolation Intensive Care Room to allow for infected patients to be isolated from other patients.
- Optional Rehabilitation single rooms
- Ensuites for Isolation rooms as well as for the Optional Rehabilitation rooms
- Burns Assisted Bathroom
- Procedure Room (or Minor OR) for wound treatment, skin grafts etc
- Optional Therapy Pool (part of patient rehabilitation)

The design of the Burns Unit should permit the monitoring of patient status under both routine and emergency circumstances. The use of centrally displayed monitor systems will be required to enhance this ability.

Patient rooms in the Burns Unit are like isolation ICU bedrooms, with sliding glazed doors at the front of the room to maximise visibility. Staff access to the room will be via the adjoining anteroom. Bed access to the room may be via the glazed sliding doors. Each room will require a dedicated ensuite. To reduce cross contamination and the spread of hospital acquired infections, all positive pressure isolation rooms in the Burns unit will require HEPA filtered air.

Optional Rehabilitation rooms with ensuites can be collocated within the unit. However, anterooms are not required to the Optional Rehabilitation rooms.

Staff Areas

Staff Areas consist of:

- Offices and workstations
- Meeting Room/s and Interview rooms for education sessions, interviews with staff or clients and other meetings
- Staff Room
- Staff Station and Clinical Handover Room
- Toilets, Shower and Lockers

Offices/ workstations will be required for administrative as well as clinical functions to facilitate educational/ research activities. Staff Areas may be shared with adjacent Units as far as possible.

Functional Relationships

A Functional Relationship can be defined as the correlation between various areas of activity which work together closely to promote the delivery of services that are efficient in terms of management, cost, and human resources. Below are the identified correct functional relationships.

External

Dependant on the location of the Burns Unit it would be ideal to have separate and discrete entry or entries for staff, goods and supplies with swipe card or similar electronic access to authorised personnel. Discrete entry for patients on beds or trolleys may also be considered.

However, principal relationships with other Units include:

- Operating Unit
- Intensive Care Unit
- Emergency Unit
- Optional Rehabilitation Inpatient Unit
- Medical Imaging
- Laboratory Services
- Biomedical Engineering
- Morgue
- Other back-of-house services such as Catering and Supply Units

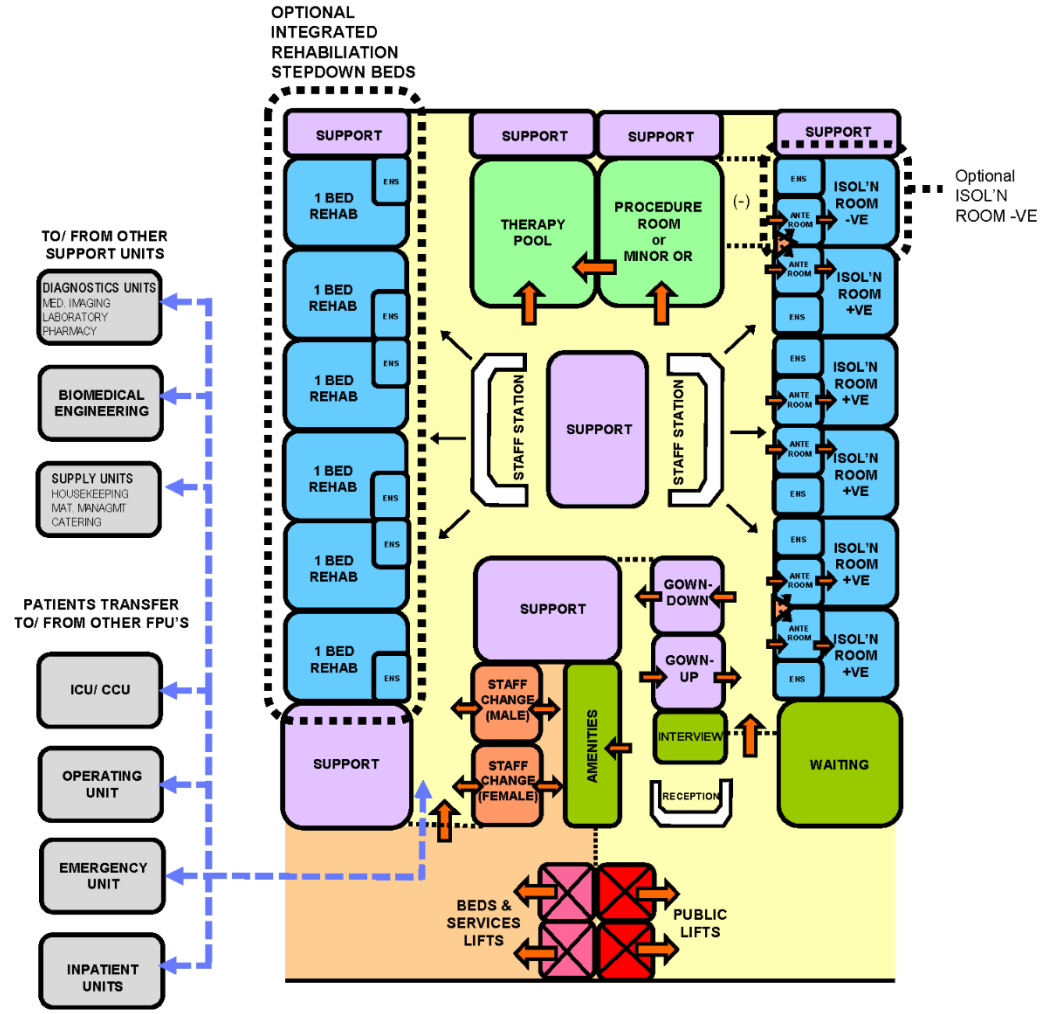
Internal

Optimal internal relationships to be achieved include:

- Patient bedrooms (minimum 50%) on the perimeter for access to windows with the remaining rooms having borrowed light via the glazed front wall
- Staff station, reporting stations and other areas which require direct access and observation of patients
- Utility and storage areas that need to be readily accessible by staff
- Public areas located on the perimeter of the Unit

Functional Relationships Diagram

Functional Relationships Diagrams are the greatest way to describe the relationships between the various components in a Burns Unit. The needs for infection control and preferences of patient management result in a variety of planning 'models' that have been proven successful over many years of experience and multiple built instances. Most Burns Unit plans are a customisation of the typical ICU pod as shown below.


OPTIONAL INTEGRATED REHABILIATION STEPDOWN BEDS
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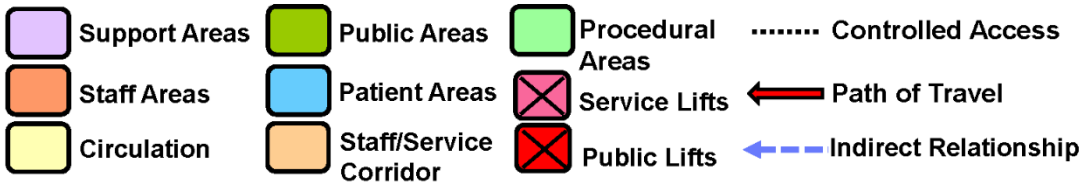
Optional ISOL'N ROOM -VE
STAFF STATION
SUPPORT
STAFF STATION
SUPPORT
GOWN-DOWN
GOWN-UP
INTERVIEW
RECEPTION
WAITING
STAFF CHANGE (MALE)
STAFF CHANGE (FEMALE)
AMENITIES
SUPPORT
BEDS & SERVICES LIFTS
PUBLIC LIFTS
TO/ FROM OTHER SUPPORT UNITS
DIAGNOSTICS UNITS
MED. IMAGING
LABORATORY
PHARMACY
BIOMEDICAL ENGINEERING
SUPPLY UNITS
HOUSEKEEPING
MAT. MANAGMT
CATERING
PATIENTS TRANSFER TO/ FROM OTHER FPU'S
ICU/ CCU
OPERATING UNIT
EMERGENCY UNIT
INPATIENT UNITS

LEGEND


Support Areas
Staff Areas
Circulation
Public Areas
Patient Areas
Staff/Service Corridor
Procedural Areas
Service Lifts
Public Lifts
Controlled Access
Path of Travel
Indirect Relationship

4 Design Considerations

General

The design will need to accommodate all types of patients using the Unit as determined by the endorsed clinical service plan; this may include paediatric patients. Provision should also be made for the management of disabled patients and bariatric patients.

Environmental Considerations

Acoustics

Consistent with critical care areas, the Burns Unit should protect its patients and reduce sound signals from patient call systems, alarms from equipment and telephones and loud conversations as this can add to the sensory overload of the patient.

Signals from staff call systems, alarms from monitoring equipment and telephones add to the sensory overload in critical care units. Without reducing their importance or sense of urgency, such signals should be modulated to a level that alert staff members yet be rendered less intrusive to patients.

The Burns Unit should be designed to minimise the ambient noise level within the unit and transmission of sound between patient areas, staff areas and public areas. Consideration should be given to the location of noisy areas or activity, preferably placing them away from quiet areas including patient bedrooms and bed bays.

For these reasons, floor coverings that absorb sound should be used while keeping infection control, maintenance, and equipment movement needs under consideration. Walls and ceilings should be constructed of materials with high sound absorption capabilities. Ceiling soffits and baffles help reduce echoed sounds. Doorways should be offset, rather than being placed in symmetrically opposed positions, to reduce sound transmission. Counters, partitions, and glass doors are also effective in reducing noise levels.

Acoustic treatment is required to the following:

- Patient Bedrooms and Ensuites
- Interview and meeting rooms
- Procedure rooms
- Staff rooms
- Change Rooms, toilets and showers

Natural Light

Natural light should be maximised throughout the Unit. Patients and staff benefit from windows in terms of sensory orientation and psychological well-being, and as many rooms as possible, but no less than 50% of the rooms, should have windows to reinforce day/ night orientation. Any rooms which do not have direct access to external light may have access to borrowed light via the glazed front wall of the rooms.

Any optional rehabilitation step-down bedrooms provided should have 100% access to fixed external windows as per all Inpatient Unit requirements within these guidelines.

Other naturally lit locations, such as a central atrium or an adjacent glazed hallway, can be used for the provision of natural light.

Privacy

The design of the Burns Unit needs to consider the contradictory requirement for staff visibility of patients while maintaining patient privacy. Unit design and location of staff stations offer varying degrees of visibility and privacy.

Each bed is to be provided with bed screens to ensure privacy of patients undergoing treatment in the room. Refer to the Standard Components for examples.

Interior Decor

Space Standards and Components

Accessibility

All patient areas should be wheelchair accessible and designed to comply with relevant accessibility standards. Reception desks and Staff Stations should provide wheelchair accessible counters.

Doors

Door openings to Burns Unit Bedrooms shall have a minimum of 1350 mm clear opening (1400 mm clear opening recommended) to allow for easy movement of beds and equipment.

Ergonomics/ OH&S

The Burns Unit should be designed with consideration to ergonomics to ensure an optimal working environment. Design and dimensions of Staff Stations and work areas must ensure privacy and security for patients, visitors and staff.

Refer also to Part C of these Guidelines.

Size of the Unit

The number of beds shall be determined by the facility's service plan. The recommended maximum number of beds visible from a single central staff station in a Burns Unit should not exceed 12 beds (± 2).

Bed Spacing/ Clearances

Bed dimensions become a critical consideration in ascertaining final room sizes. The dimensions noted in these Guidelines are intended as minimums and do not prohibit the use of larger rooms where required.

All patient beds must comply with standard components for fittings, furniture, mechanical and electrical services and staff call systems including the clearances that they imply.

In critical care bedrooms a minimum of 1200 mm clearance around both sides and the foot of the bed is recommended. At the head of the bed, a minimum of 300 mm clearance should be allowed between the bed and any fixed obstruction or wall.

Generally, follow the same standards as ICU.

Drug Storage

Drugs prescribed at the hospital should not be stored in the patient bedroom or bed bays. All drugs should be managed by the responsible nurses via a Medication Room.

Optionally the Medication Room may be combined with a Clean Utility room as long as the requirements of both functions are accommodated.

In both scenarios, the room must contain:

- Benches and shelving
- Lockable cupboards for the manual storage of restricted substances or provision of an automated Medication Management System
- A lockable steel cabinet for the storage of drugs of addiction/ narcotics
- A refrigerator, as required; to store restricted substances. It must be lockable or housed within a lockable storage area
- Controlled access to staff only and CCTV surveillance camera/s
- Space for a medication trolley

Storage of dangerous and controlled drugs must be in accordance with the relevant legislation and not stored in a patient bedroom.

Bariatric Patient Facilities

The Burns Unit will require provisions for bariatric patients, including ceiling suspended lifting systems between the Bedroom bed area and an adjacent Ensuite. Provide additional bariatric rooms as required by the facility service plan.

All fixtures and fittings for bariatric patients need to accommodate up to 350 kg weight.

Safety and Security

The Burns Unit shall provide a safe and secure environment for patients, staff and visitors, while remaining a non-threatening and supportive atmosphere conducive to recovery.

The facility, furniture, fittings and equipment must be designed and constructed in such a way that all users of the facility are not exposed to avoidable risks of injury.

Security issues are important due to the increasing prevalence of violence and theft in health care facilities.

The arrangement of spaces and zones shall offer a high standard of security through the grouping of like functions and the provision of optimum observation for staff. The level of observation and visibility has security implications. Control over access and egress from the Unit is mandatory.

Refer also to Part C – Access, Mobility and OH&S in these Guidelines.

Finishes

Finishes including fabrics, floor, wall and ceiling finishes, should be pleasant and non-institutional as far as possible. The following additional factors should be considered in the selection of finishes:

- Acoustic properties
- Durability
- Ease of cleaning
- Infection control
- Fire safety
- Movement of equipment

In areas where clinical observation is critical such as bedrooms and treatment areas, lighting and colour selected must not impede the accurate assessment of skin tones.

Walls shall be painted with lead free paint and wall protection provided where bed or trolley movement occurs such as corridors, patients' bedrooms, storage and treatment areas.

Fittings, Fixtures & Equipment

Window Treatments

Each room shall have partial blackout facilities to allow patients to rest during the daytime. As a Burns Unit is a type of ICU, curtains over external windows are not recommended. Instead provide blinds according to one of the following options:

- Vertical blinds and Holland blinds (not horizontal blinds) as they do not provide surfaces for collecting dust
- Horizontal blinds within double-glazed or triple-glazed window assembly with a knob control on the bedroom side, known as integral venetian blinds

Bedside Monitoring

Bedside monitoring equipment should be located to permit easy access and viewing, and should not interfere with the visualisation of, or access to the patient. The bedside nurse and/ or monitor technician must be able to observe the monitored status of each patient at a glance. This goal can be achieved either by a central monitoring station, or by bedside monitors that permit the observation of more than one patient simultaneously. Neither of these methods is intended to replace bedside observation.

Weight-bearing surfaces that support the monitoring equipment should be sturdy enough to withstand high levels of strain over time. It should be assumed that monitoring equipment will increase in volume over time. Therefore, space and electrical facilities should be designed accordingly.

Patient Entertainment Systems

Patients may be provided with entertainment/ communications systems according to the Operational Policy of the facility including television, bedside telephone, radio and internet (Wi-Fi) access. A single patient handset may combine the entertainment system, staff call system and lighting control all in one.

Bed Screens

Provide bed screens directly behind glazed front wall to each patient room for privacy reasons.

Privacy bed screens must be washable and fireproof. Disposable bed screens may also be considered.

Patient monitoring

Staff must have direct or indirect visualisation of patients within the Burns Unit, to permit the monitoring of patient status under both routine and emergency circumstances. Centrally displayed monitor systems may be used to enhance this ability. The preferred design is to allow a direct line of vision between the patients and central Staff Station.

Like the ICU the inclusion of sliding glass doors to the front of some rooms facilitate visibility, however, all patients within the Burns unit will be managed in a single bedroom environment to avoid cross contamination and incidence of hospital acquired infections.

Building Services Requirements

This section only identifies unit specific services briefing requirements and must be read in conjunction with Part E - Engineering Services for a complete list of applicable parameters and standards.

Mechanical Services (HVAC)

The air temperature in inpatient areas should be capable of being maintained along with relative humidity. A local thermostat in the patient room should be provided from which room temperature can be adjusted by the occupant.

The burns bathroom will require specific temperature control and monitoring. An ambient temperature of 26°– 28˚ Celsius will be required.

All HVAC units and systems are to comply with services identified in the Standard Components and Part E – Engineering Services in these Guidelines.

Medical Gases

Medical gas is used for administering anaesthesia to a patient, therapy, diagnosis or resuscitation.

Medical gases shall be installed, readily available and dedicated for each patient.

Oxygen, medical air and suction must be provided to all beds. Medical gases will be provided for each bed according to the quantities noted in the Standard Components - Room Data Sheets.

Refer to Part E - Engineering Services for details.

Hydraulics/ Water Treatment

Warm water supplied to all areas accessed by patients within the Unit should be maintained at 38°C and shall not exceed 43°C. This requirement applies to all staff handwash basins and sinks in patient accessible areas.

Refer to Part E - Engineering Services for details.

Information Technology (IT) and Communications

Unit design should address the following Information Technology/ Communications issues:

- Health Information System (HIS)
- Electronic Health Records (EHR) which may form part of the HIS
- Hand-held tablets and other smart devices
- Picture Archiving Communication System (PACS)
- Paging and personal telephones replacing some aspects of call systems/ DECT
- Data entry including scripts and investigation requests
- Bar coding for supplies, and X-rays/ Records if physical copies are still being used
- Data and communication outlets, servers and communication room requirements
- Wi-Fi availability for staff, patients and/ or visitors

Nurse Call / Emergency Call / Staff Call

Hospitals must provide an electronic call system next to each patient bed to allow for patients to alert staff and other allied healthcare in a discreet manner at all times. Patient calls are to be registered at the Staff Stations and must be audible within the service areas of the Unit including Clean Utilities and Dirty Utilities. If calls are not answered the call system should escalate the call priority. The Nurse Call system may also use mobile paging systems or SMS to notify staff of a call.

Pneumatic Tube Systems (PTS)

The Burns Unit may include a pneumatic tube station, as determined by the facility's operational policy. If provided the station should be located in close proximity to the Staff Station or under direct staff supervision. Requirements include:

- The bay should not impede access within staff station areas
- Racks should be provided for pneumatic tube canisters
- Wall protection should be installed to prevent wall damage from canisters

When required a second PTS station may be provided within the medication storage area.

Refer to Part E - Engineering Services for details.

Renal Dialysis Facilities

Dialysis facilities including reverse osmosis (RO) water and drainage should be provided to patient bedrooms according to Unit's Operational Policy. As a minimum, dialysis facilities should be provided in the Isolation Room/s, plus one per pod outside isolation room (for example in the Rehabilitation bedroom area). In all other rooms provision should be made for cold water connection for the possible use of portable Renal Dialysis equipment. Refer to Part E – Engineering Services for details.

Infection Control

A major clinical focus in the management of severe burns is infection control. Patients with burn injuries are at a high risk of infection.

The goal is to provide patients with a broad region of skin injury with the best possible protection by using specially built isolation rooms in the Burn Units.

Hand Basins

Handwashing facilities shall be provided in the corridors, critical care bedrooms and other rooms as specified by the Standard Components in these Guidelines.

Hand-washing facilities shall not impact on minimum clear corridor widths.

At least one handwashing bay is to be conveniently accessible to the Staff Station and unit entry/exit.

Hand basins are to comply with Standard Components Bay - Hand-washing and Part D - Infection Control.

Hand Basins in patient bedrooms is provided for the exclusive use by staff for infection control considerations. Hand basins are available in the ensuites for patients and their visitors which shall not be used by Staff.

Antiseptic Hand Rubs

Antiseptic hand sanitisers should be located so they are readily available for use at points of care, at the end of patient beds and in high traffic areas. The placement of antiseptic hand sanitisers should be consistent and reliable throughout the facilities.

Antiseptic hand sanitisers, although very useful and welcome, cannot fully replace Hand Wash Bays.

Antiseptic hand sanitisers are to comply with Part D in these Guidelines.

Isolation Rooms

Isolation Rooms can only accommodate one patient bed per room.

The Burns Unit shall include at least one negative pressure Isolation Room with attached Anteroom per pod of 12 or as many as required by the Clinical Service Plan of the Unit. Clinical handwashing, gown and mask storage, and waste disposal shall be provided within the anteroom.

An attached ensuite must be provided for each isolation room.

Refer to Part D – Infection Control in these Guidelines.

5 Components of the Unit

Standard Components

Standard Components are typical rooms in a health facility, each represented by a Room Data Sheet (RDS) and Room Layout Sheet (RLS). Sometimes, there are more than one configuration possible and therefore, more than one room layout sheet can be found in the Standard Components for a room with same function. They may differ in room size and/or the requirement of FF&FE items.

The Room Data Sheets are presented in a written format, describing the minimum briefing requirements of each room type divided into the following categories:

- Room Primary Information; includes Briefed Areas, Occupancy, Room Description, relationships and special room requirements.
- Building Fabric and Finishes; describes fabric and finishes for the room's ceiling, floor, walls, doors and glazing requirements.
- Furniture and Fittings; lists all the fittings and furniture typically located in the room; Furniture and Fittings are identified with a group number indicating who is responsible for providing the item according to a widely accepted description as follows:

Group	Description
1	Provided and installed by the Builder/ Contractor
2	Provided by the Client and installed by the Builder/Contractor
3	Provided and installed by the Client

- Fixtures and Equipment; includes all the serviced equipment typically located in the room along with the services required such as power, data and hydraulics; Fixtures and Equipment are also identified with a group number as above indicating who is responsible for provision.
- Building Services; indicates the requirement for communications, power, Heating, Ventilation and Air conditioning (HVAC), medical gases, nurse/ emergency call and lighting along with quantities and types where appropriate. Provision of all services items listed is mandatory.

The Room Layout Sheets (RLS's) are indicative plan layouts and elevations illustrating an example of good design. The RLS indicated are deemed to satisfy these Guidelines. Alternative layouts and innovative planning shall be deemed to comply with these Guidelines provided that the following criteria are met:

- Compliance with the text of these Guidelines
- Minimum floor areas as shown in the schedule of accommodation
- Clearances and accessibility around various objects shown or implied
- Inclusion of all mandatory items identified in the RDS

Standard Components have considered the required design parameters described in these Guidelines. Each FPU should be designed with compliance to Standard Components - Room Data Sheets and Room Layout Sheets, nominated in the Schedules of Accommodation in Appendices of this FPU.

Non-Standard Components

Non-standard components are identified in the Schedules of Accommodation as NS.

6 Schedule of Equipment (SOE)

The Schedule of Equipment (SOE) below lists the major equipment required for the key rooms in this FPU.

Room Name		
1 Bed Room - Intensive Care, Room Code (1br-icu-25-i)		
Air flowmeter	Infusion pump: single channel	Sequential compression unit (may be shared)
Bed: ICU, electric	Infusion pump: syringe	Suction adapter
Chair: recliner, electric	Light: procedure (may be part of supply unit/ pendant)	Supply unit: ceiling
Haemodialysis unit: CRRT (optional or haemodialysis unit)	Monitor: physiologic, critical care	Ventilator: adult/ paediatric
Infusion pump: enteral feeding	Oxygen flowmeter	
1 Bed Room - Standard, Rehabilitation, Room Code (1br-st-18-i)		
Air flowmeter	Locker: bedside	Suction adapter
Bed: inpatient, electric	Oxygen flowmeter	Table: overbed

7 Schedule of Accommodation

The Schedule of Accommodation (SOA) identifies the rooms required in the Unit along with the quantity and the recommended room area. The sum of these room areas is the Sub Total and Total Departmental areas with a recommended circulation percentage. The circulation percentage represents the area required for internal corridors and is a target for efficient planning. SOAs and room sizes are developed for typical units and are organised into the functional zones applicable to the Unit. Not all rooms identified are mandatory requirements and optional rooms are indicated. Quantities of rooms may need to be proportionally adjusted to suit the desired unit size and service needs.

The Schedules of Accommodation are developed for particular levels of service known as Role Delineation Level (RDL) and numbered from 1 to 6 (including in-between numbers such as 4-5).

Level 1 represents uncomplicated health facilities, ascending to level 6 representing complex specialist services and hospitals. Refer to the full Role Delineation Level Framework in these guidelines for a full description of the RDL's identified. RDL Levels not listed are not applicable for this service.

The Schedule of Accommodation for a typical Burns Unit at RDL Level 5 or 6 with 12 beds follows. The Schedule of Accommodation lists generic spaces that form a Burns Unit. Quantities and sizes of some spaces need to be determined in response to the service needs of each unit on a case-by-case basis.

Burns Unit

Room/ Space	Standard Component Room Codes	RDL 5/6 Qty x m2 12 Beds			Remarks
Entry / Reception					
Reception/ Clerical	recl-15-i similar	1	x	12	Optional
Waiting	wait-50-i similar	1	x	40	1.2 m2 per person; 1.5 m2 per wheelchair
Meeting Room	meet-l-15-i	1	x	15	Interviews/ meetings; can be used as family distress room
Toilet - Public	wcpu-3-i	2	x	3	May share public amenities if located close
Toilet - Accessible	wcac-i	1	x	6	May share public amenities if located close
Gown-up	gw-up-i	1	x	6	
Gown-down	gw-dn-i	1	x	6	
Patient Areas					
1 Bed Room - ICU	1br-icu-25-i	5	x	25	Positive Pressure, Group of 12, within vision of Staff Station. See notes for additional comments at the end of this SOA.
1 Bed Room Standard - Rehabilitation	1br-st-18-i 1br-st-28-i	6	x	28	Optional fully enclosed Rehabilitation Bed rooms. Facility can decide the mix of ICU and Rehabilitation rooms in a Group of 12.
1 Bed Room - ICU, Class N Isolation	1br-icu-25-i similar	1	x	25	Negative Pressure Isolation; quantity dependent on service plan
Anteroom	anrm-i	6	x	6	To both Positive and Negative Pressure bed rooms
Ensuite - Super	ens-sp-i	12	x	6	Size for 'full assistance', i.e. 2 staff plus equipment
Procedure Room (Minor OT)	or-ms-i	1	x	36	
Therapy Pool	NS	1	x	35	Optional, however it is recommended
Support Areas					
Bathroom - Assisted	bath-i similar	1	x	20	Burns Bathroom with additional temperature control - ambient temp should be 26 - 28 OC
Bay - Beverage	bbev-enc-i	1	x	5	
Bay - Blanket Warmer	bbw-1-i	1	x	1	Optional
Bay - Handwashing, Type A	bhws-a-i	3	x	1	At Unit entry and adjacent to staff stations; refer to Part D

Room/ Space	Standard Component Room Codes	RDL 5/6 Qty x m2 12 Beds			Remarks
Bay - Linen	blin-i	2	x	2	
Bay - Mobile Equipment	bmeq-4-i	2	x	4	
Bay - Pathology (Satellite Laboratory)	bpath-3-i	1	x	3	
Bay - Pneumatic Tube	bpts-i	1	x	1	Optional, may be located with Pathology Bay or Staff Station
Bay - PPE	bppe-i	2	x	1.5	As required, may be combined with Bay-Handwashing at Staff Stations
Bay - Resuscitation Trolley	bres-i	1	x	1.5	
Cleaners Room	clrm-6-i	1	x	6	Smaller units may share with a collocated unit
Clean Utility	clur-12-i	1	x	12	May be interconnected with Medication room
Medication Room	medr-10-i	1	x	10	May be interconnected with Clean Utility room
Clean Utility/ Medication Room	clum-14-i	1	x	*	*Optional , if preference is to combine Clean Utility and Medication Room into a single Room, Minimum 14 m2
Dirty Utility	dtur-14-i	1	x	14	
Disposal Room	disp-8-i	1	x	8	Optional
Equipment Clean-up	ecl-8-i	1	x	8	Room size according to service requirements
Office - Clinical / Handover	off-cln-i similar	1	x	15	Locate near staff station
Reporting station	rpst-2-i	6	x	2	De-centralised reporting stations between bedrooms. Provide one per two bedrooms if there is no direct observation from the Staff Station to the bed.
Staff Station	sstn-20-i	2	x	20	Qty depends on design of Unit to optimise direct line of sight to all patient bed rooms
Store - Drugs	stdr-5-i	1	x	5	Optional
Store - Equipment	steq-15-i	1	x	15	May be subdivided
Store - General	stgn-16-i	1	x	16	
Store - Sterile Stock	stss-24-i	1	x	24	Room size according to service requirements
Therapy Pool	NS	1	x	35	Optional however highly recommended; individual pool for patient clean-up optimally connected to Minor OR
Change Cubicle - Patient	chpt-d-i similar	2	x	6	Optional, separate for male and female, adjacent to OR and Therapy Pool
Biomedical Workshop/ Respiratory work Room	rewm-i	1	x	20	

Room/ Space	Standard Component Room Codes	RDL 5/6 Qty x m2 12 Beds			Remarks
Staff Areas					
Office - Single Person	off-s9-i	1	x	9	Unit Manager
Office - 2 Person, Shared	off-2p-i	1	x	12	Nurse Educators, Staff Specialists, Clinicians
Office - Workstation/s	off-ws-i	4	x	5.5	Registrars, Nursing, Secretarial
Meeting Room	meet-l-25-i	1	x	25	Quantity and size dependent on Service Plan
Bay - Beverage	bbev-enc-i	1	x	5	Optional, near Meeting Room/s
Store - Photocopy/ Stationery	stps-8-i	1	x	8	
Staff Room	srm-20-i	1	x	20	May be shared
Change - Staff (Male/Female)	chst-14-i similar	2	x	12	Toilets, Shower & Lockers; size depends on staff numbers
Sub Total		**732.5**			
Circulation %		**40**			
Total Areas		**1026**			

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the Standard Components.
- Rooms indicated in the schedule reflect the typical arrangement according to the sample bed numbers.
- All the areas shown in the SOA follow the No-Gap system described elsewhere in these Guidelines.
- Exact requirements for room quantities and sizes shall reflect Key Planning Units (KPU) identified in the Clinical Service Plan and the Operational Policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Offices are to be provided according to the number of approved full-time positions within the Unit.
- One ante-room for each positive and negative pressure isolation room is required in new facilities. One anteroom shared between two rooms with same type of pressurisation may be permitted in existing facilities undergoing refurbishments and are limited by available space.
- Based on the Units service plan, back-to-back burns rehabilitation rooms may be considered. Burns rehabilitation rooms will be standard isolation with ensuite bathroom, positive pressure without ante-room.

8 Further Reading

In addition to Sections referenced in this FPU, i.e. Part C- Access, Mobility, OH&S and Part D - Infection Control and Part E - Engineering Services, readers may find the following helpful:

- DH (Department of Health) (UK) Health Building Note 04-02: Critical Care Units, 2013. Refer to www.england.nhs.uk/estates/health-building-notes/
- Burn model of care, Statewide Burn Injury Service, NSW Government, Agency for Clinical Innovation, NSW Health, – refer to www.aci.health.nsw.gov.au
- AHIA, Australasian Health Facility Guidelines, Part B Health Facility Briefing and Planning, HPU 0360 - Intensive Care - General, Rev 7, 2019; refer to website: https://healthfacilityguidelines.com.au/health-planning-units